IN THE CLAIMS:

1. (Cancelled)

2. (Cancelled)

3. (Cancelled)

4. (Cancelled)

5. (Cancelled)

6. (Cancelled)

7. (Cancelled)

8. (Cancelled)

9. (Cancelled)

10. (Cancelled)

11. (Cancelled)

12. (Cancelled)

13. (Cancelled)

14. (Cancelled)

15. (Previously presented) A material system produced by:

fluorescing a pre-process composite material having a plurality of nanocrystals and a plurality of traps to obtain a light emission spectrum;

performing an analysis of said light emission spectrum;

directing an energy beam at the pre-process composite material to reduce the size of the plurality of nanocrystals and to reduce the number of the plurality of traps to produce a post-process composite material capable of white light emission when fluoresced.

16. (Original) A material system comprising:

a plurality of nanocrystals;

a plurality of first and second traps; and

said plurality of nanocrystals, first traps and second traps capable of emitting white light in combination when excited.

17. (Original) The material system of claim 16, wherein said nanocrystals are from the group consisting of Group II-VI, Group III-V and Group IV semiconductor materials capable of emitting visible light upon excitation.

18. (Original) The material system of claim 16, wherein said nanocrystals are from the group consisting of ZnSe, CdSe, and CdS.

19. (Original) The material system of claim 16, wherein said first and second traps are from the group consisting of impurities that emit red and green light.

20. (Original) The material system of claim 16, wherein said first and second traps are from the group consisting of Se molecules, Se vacancies and zinc vacancies.

21. (Original) The material system of claim 16, further including a glass material.

22. (Original) The material system of claim 16, further including potassium borosilicate glass.

23. (Original) A material system comprising:

a plurality of nanocrystals designed to emit blue light when excited and having an average particle size of 1 to 20 nanometers;

a plurality of first traps designed to emit red light when excited; and

a plurality of second traps designed to emit green light when excited.

24. (Original) A material system comprising:

a matrix including nanocrystals having particle sizes in the range of 1 to 20 nanometers; and

said matrix further including first traps configured to emit red light and second traps configured to emit green light when fluoresced.

25. (Original) A material system capable of white light emission when excited comprising:

a matrix having a plurality of nanocrystals; and

said plurality of nanocrystals configured to contribute in the blue spectral range of the white light emission from the quantum confined bandedge emission of said nanocrystals when excited.

26. (Original) The material system of claim 25, further comprising:

a plurality of first and second traps; and

said first traps configured to contribute in the red spectral range of the white light and said second traps configured to contribute in the green spectral range of the white light when excited.

27. (Original) The material system of claim 26, wherein said plurality of nanocrystals have a predetermined size.

28. (Original) The material system of claim 27, wherein said plurality of first and second traps have a predetermined density to control the intensity of the white light emission when excited.

29. (Cancelled)

30. (Cancelled)

31. (Cancelled)

32. (Cancelled)

33. (Cancelled)

34. (Cancelled)

35. (Cancelled)

36. (Cancelled)

37. (Cancelled)

38. (Cancelled)

39. (Cancelled)

40. (Cancelled)

41. (Cancelled)

42. (Cancelled)

43. (Cancelled)

44. (Cancelled)

45. (Original) A material system configured to produce white light emission when excited comprising:

a plurality of ZnSe nanocrystals in a predetermined size designed to optimize the contribution of blue light to the white light emission; and

a plurality of traps in a predetermined density designed to adjust the contribution of red and green light to the white light emission.

46. (Original) The material system of claim 16, wherein the efficiency of the white light emission is approximately in the range of 50 to 90%.

47. (Original) The material system of claim 16, wherein the efficiency of the white light emission is approximately greater than 80%.

48. (Original) A material system comprising:

a matrix having nanocrystals and capable of white light emission when fluoresced; and

wherein efficiency of said white light emission is approximately in the range of 50 to 90%.

49. (Original) A material system comprising:

a matrix having nanocrystals and capable of white light emission when fluoresced; and

wherein efficiency of said white light emission is approximately greater than 80%.

50. (Original) A white light source comprising:

a plurality of nanocrystals;

a plurality of first and second traps; and

said plurality of nanocrystals, first traps and second traps capable of emitting white light in combination when excited.

51. (Original) An LCD comprising:

a plurality of nanocrystals;

a plurality of first and second traps; and

said plurality of nanocrystals, first traps and second traps capable of emitting white light in combination when excited.

52. (Original) An LED comprising:

a plurality of nanocrystals;

a plurality of first and second traps; and

said plurality of nanocrystals, first traps and second traps capable of emitting white light in combination when excited.

53. (Original) An electroluminescent display comprising:

a plurality of composite material substrates each having

a plurality of nanocrystals;

a plurality of first and second traps; and

said plurality of nanocrystals, first traps and second traps capable of emitting white light in combination when excited.